REMARKS

This response is intended as a full and complete response to the final Office Action mailed June 15, 2004. In the Office Action, the Examiner notes that claims 1 and 3-22 are pending, of which claims 1 and 3-22 stand rejected. By this response claims 1 and 3-22 continue without amendment.

In view of the following discussion, the Applicants submit that none of the claims now pending in the application are obvious under the provisions of 35 U.S.C. §103. Thus, the Applicants believe that all these claims are now in allowable form.

RESPONSE TO EXAMINER

The Examiner is thanked for his efforts regarding the subject application. Regarding the Examiner's "Response to Amendment" found on page 2 of the June 15, 2004 Office Action, the Applicant respectfully disagrees and asks the Examiner to reconsider claims 1 and 3-22 based on what follows.

Applicant notes that all of the independent claims relate to electronic program guides that are generated at a head-end by rendering IPG screens as video overlays and providing the resulting video sequence via a channel to, illustratively, a set top box. Independent claims 1, 14, and 22 explicitly refer to the head-end while independent claim 21 implicitly does so (" wherein the one or more custom-IPG screens are provided on the output signal upon receiving a request for the custom-IPG"). Contrary to the position taken in the Office Action, Lawler does not teach or suggest generating an electronic program guide at the head end.

In Lawler, program data is sent from a head end to a local box, but the electronic program guide imagery itself is locally formed using a local graphics processor, multiplexer, and the like. The Examiner's attention is directed to Figure 2 of Lawler, and specifically to the video processor 63, the mixer 64, and to the memory 60. The Examiner's attention is further directed to Lawler, column 6, lines 7 through 28 for a description of the hardware. Specifically, column 6, lines 15-18 describes forming an electronic program guide locally: "*The interactive station controller 18 may includes a graphics subsystem 62 that is controlled by the CPU 58 to form graphics images,*

including user interface displays, on the video display 20." This client-centric system is entirely different than the server-centric arrangement of the present invention.

Lawler also makes numerous references to electronic program guide servers and data (e.g., column 4, lines 9-10 and 36-51, and column 7, lines 20-27), but the electronic program guide itself is only described and being produced locally in the interactive station controller 18, reference column 7, lines 21-23.

Lemmons et al. (U.S. Patent 6,442,755) is similar to Lawler in that the electronic program guide is generated locally. The Examiner's attention is directed to Lemmons, column 1, line 57-column 2, line 12. Additionally, Eyer (US 6,160,545) is also described as locally producing an electronic program guide. The Examiner's attention is directed to Eyer, Figures 1 and 3, specifically to the video display generator 190, and to the Eyer Abstract and Summary. In fact, Eyer teaches data filters to select data for local boxes. Finally, Shiga (U.S. Patent 6,005,562) is also described as forming an electronic program guide locally, reference Shiga, column 19, lines 20-42. Applicants' ask the Examiner to distinguish between the interactive program guide data and the program guide itself. In all cases the data is used locally to produce an interactive program guide.

Using the head-end to generate (render) custom electronic program guides allows a very sophisticated program guide to be produced without the cost and expense of a local set top box having sophisticated graphics processing and video multiplexing capability. All that is required is a set top box that supports bi-direction capability and the tuning and demultiplexing of video channels. Furthermore, when custom electronic program guides are produced at the head-end as per the invention the need to send a separate electronic program guide data stream is removed, as is the need to stored such data.

The Examiner is requested to consider the foregoing and to carefully read and understand Lawler. For completeness, the individual rejections are addressed below.

REJECTIONS

35 U.S.C. §102

Claims 1 and 3-13

The Examiner has rejected claims 1 and 3-13 under 35 U.S.C. 103(a) as being unpatentable over Lawler (5,805,763, hereinafter "Lawler") in view of Lemmons (6,442,755, hereinafter "Lemmons"). Applicants respectfully traverse the rejection.

The test under 35 U.S.C. §103 is not whether an improvement or a use set forth in a patent would have been obvious or non-obvious; rather the test is whether the claimed invention, considered as a whole, would have been obvious. Jones v. Hardy, 110 U.S.P.Q. 1021, 1024 (Fed. Cir. 1984) (emphasis added). Thus, it is impermissible to focus either on the "gist" or "core" of the invention, Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve, Inc., 230 U.S.P.Q. 416, 420 (Fed. Cir. 1986). Moreover, the invention as a whole is not restricted to the specific subject matter claimed, but also embraces its properties and the problem it solves. In re Wright, 6 U.S.P.Q. 2d 1959, 1961 (Fed. Cir. 1988) (emphasis added).

Applicants' claim 1 recites:

> "A method for providing a custom interactive program guide (custom-IPG), the method comprising:
> receiving selections indicative of a set of channels to be included in the custom-IPG;
> rendering one or more custom-IPG screens, at a head end, having included therein the set of selected channels;
> receiving a request to view a custom-IPG screen on a particular channel;
> overlaying the custom-IPG screen on a video sequence being provided on the particular channel to generate a modified video sequence having included therein the custom-IPG; and
> providing the modified video sequence on the particular channel from the head end."

Applicants assert that neither Lawler nor Lemmons, either singly or in combination, teach the Applicants' invention as a whole.

Lawler discloses an interactive recording system that enables a user to select a program for recording from a program guide. In response to a user selection, the

system sets a "record tag" that identifies the selected program to be recorded. The record tag is monitored and, at the appropriate time, prompts the system to control the recording of the program. Such controlled recording either can be at the user site or at the head end.

The Lawler reference fails to disclose each and every element of the claimed invention, as arranged in the claims. In particular, Lawler does not teach or suggest rendering one or more custom-IPG screens at a head end. Furthermore, Lawler does not teach providing a modified video sequence (which includes the custom-IPG screen) on the particular channel from the head end. Therefore, Lawler fails to teach or suggest the Applicants' invention as a whole.

Furthermore, Lemmons fails to bridge the substantial gap between Lawler and the Applicants' invention. Specifically, Lemmons discloses an interactive television program guide having elements that are arranged and styled using markup language documents. The program guide interprets the markup language documents and locally generates display screens and program guides. The program guides may be updated by supplying new markup language documents that modify display screens and program guide functionality. The markup language documents may be supplied by a main facility or a television distribution facility.

In addition, nowhere in Lemmons is there any teaching or suggestion of receiving a request for a custom-IPG screen on a particular channel or providing a custom-IPG screen from the head end.

Therefore, even if the two references could somehow be operably combined, the combination would still not provide a modified video sequence (which includes the custom-IPG screen) on a requested channel from the head end. Therefore the combined references fail to teach or suggest Applicants' invention as a whole.

As such, the Applicants submit that claim 1 is not obvious and fully satisfies the requirements of 35 U.S.C. §103 and is patentable thereunder. Furthermore, claims 3-13 depend directly or indirectly from claim 1 and recite similar features thereof. As such, and for at least the same reasons as discussed above, the Applicants submit that claims 3-13 are also not obvious and fully satisfy the requirements of 35 U.S.C. §103

and are patentable thereunder. Therefore, the Applicants respectfully request that the rejections be withdrawn.

Claims 14-20

The Examiner has rejected claims 14-20 under 35 U.S.C. §103(a) as being unpatentable over Lawler in view of Eyer (5,982,445, hereinafter "Eyer '445"). Applicants respectfully traverse the rejection.

Applicants' independent claim 14 recites:

> "A method for creating a custom interactive program guide (custom-IPG), the method comprising:
> activating a program guide customization process;
> receiving a pop-up menu provided to assist in the customization process;
> selecting a channel on which to receive the custom-IPG;
> selecting a set of channels to be included in the custom-IPG; and
> receiving on the selected channel a custom-IPG screen having included therein the set of selected channels, wherein the custom-IPG screen is rendered at a head end."

Neither Lawler nor Eyer '445, either singly or in combination, teaches the Applicants' invention as a whole.

As discussed above, Lawler discloses an interactive recording system that enables a user to select a program for recording from a program guide. In response to a user selection, the system sets a "record tag" that identifies the selected program to be recorded. The record tag is monitored and, at the appropriate time, prompts the system to control the recording of the program. Such controlled recording either can be at the user site or at the head end.

The Lawler reference fails to disclose each and every element of the claimed invention, as arranged in the claims. In particular, Lawler does not teach or suggest selecting a channel on which to receive a custom-IPG and then receiving that custom-IPG screen on the selected channel, wherein the custom-IPG screen is rendered at a head end.

Furthermore, Eyer '445 fails to bridge the substantial gap as between Lawler and the Applicants' invention. Specifically, Eyer '445 discloses an Interactive Program

Guide (IPG) data that is delivered to integrated receiver-decoders (IRDs) via, for example, satellite. The IPG data provides scheduling information for global and local programming services. Each IRD is assigned to an IPG region, and IPG data is filtered so that only the global data and the region-specific data for the IRD's IPG region is retained and processed by the IRD. Channel map data is also delivered to the IRDs so that bundles of IRD data can be filtered to discard program sources that are not present in the channel map. The IRD data which is retained after filtering is used to provide scheduling information via an on-screen display. The data is used to locally generate IPG imagery, in stark contrast to the claimed invention.

However, nowhere in Eyer '445 is there any teaching or suggestion of selecting a channel on which to receive the custom-IPG and then receiving a custom-IPG screen on the selected channel, wherein the custom-IPG screen is rendered at a head end. Thus, even if the two references could somehow be operably combined the combination would still not provide for selecting a channel on which to receive a custom-IPG and then receiving that custom-IPG screen on the selected channel, wherein the custom-IPG screen is rendered at a head end.

The combined references fail to embrace the problems that the Applicants' invention solves. Therefore, the combination of Lawler and Eyer '445 fails to teach or suggest the Applicants' invention as a whole.

As such, the Applicants submit that independent claim 14 is not obvious and fully satisfies the requirements of 35 U.S.C. §103 and is patentable thereunder. Furthermore, claims 15-18 depend directly or indirectly from claim 14 and recite similar features thereof. As such, and for at least the same reasons as discussed above, the Applicants submit that claims 15-18 are also not obvious and fully satisfy the requirements of 35 U.S.C. §103 and are patentable thereunder. Therefore, the Applicants respectfully request that the rejections be withdrawn.

Claim 21

The Examiner has rejected claim 21 under 35 U.S.C. 103(a) as being unpatentable over Eyer (6,160,545, hereinafter "Eyer '545") in view of Lawler.

Applicants' independent claim 21 recites:

> "A system for providing a custom interactive program guide (custom-IPG), comprising:
> a video session manager operative to receive selections indicative of a set of channels to be included in the custom-IPG and to receive a selected channel on which to receive the custom-IPG;
> at least one video encoder operatively coupled to the video session manager and configured to render and encode one or more custom-IPG screens having included therein the set of selected channels;
> a transport multiplexer coupled to the video encoder and operative to receive the one or more encoded custom-IPG screens and generate a transport stream; and
> a modulator coupled to the transport multiplexer and operative to receive the transport stream and generate an output signal suitable for transmission on the selected channel, and
> wherein the one or more custom-IPG screens are provided on the output signal upon receiving a request for the custom-IPG. " [Emphasis added]

Neither Eyer '545 nor Lawler, either singly or in combination, teaches the Applicants' invention as a whole.

As discussed above, Lawler discloses an interactive recording system that enables a user to select a program for recording from a program guide. In response to a user selection, the system sets a "record tag" that identifies the selected program to be recorded. The record tag is monitored and, at the appropriate time, prompts the system to control the recording of the program. Such controlled recording either can be at the user site or at the head end.

The Lawler reference fails to disclose each and every element of the claimed invention, as arranged in the claims. In particular, Lawler does not teach or suggest a video session manager operative to receive a selected channel on which to receive a custom-IPG, or a modulator that generates an output signal suitable for transmission on the selected channel.

Eyer '545 fails to bridge the substantial gap as between Lawler and the Applicants' invention. Specifically, Eyer '545 discloses an Interactive Program Guide (IPG) data that is delivered to integrated receiver-decoders (IRDs) via, for example, satellite. The IPG data provides scheduling information for global and local

programming services. Each IRD is assigned to an IPG region, and IPG data is filtered so that only the global data and the region-specific data for the IRD's IPG region is retained and processed by the IRD. Channel map data is also delivered to the IRDs so that bundles of IRD data can be filtered to discard program sources that are not present in the channel map. The IRD data which is retained after filtering is used to provide scheduling information via an on-screen display.

Nowhere in Eyer '545 is there any teaching or suggestion of a video session manager that is operative to receive a selected channel on which to receive a custom-IPG, or a modulator that generates an output signal suitable for transmission on the selected channel.

The combined references fail to embrace the problems that the Applicants' invention solves. Therefore, the combination of Lawler and Eyer '545 fails to teach or suggest the Applicants' invention as a whole. As such, the Applicants submit that independent claim 21 is not obvious and fully satisfies the requirements of 35 U.S.C. §103 and is patentable thereunder. Therefore, the Applicants respectfully request that the rejections be withdrawn.

Claim 22

The Examiner has rejected claim 22 under 35 U.S.C. 103(a) as being unpatentable over Shiga (6,005,562, hereinafter "Shiga") in view of Lawler.

Applicants' independent claim 22 recites:

> "A set top terminal (STT) for providing a custom interactive program guide (custom-IPG), comprising
> a demodulator operative to receive a modulated signal and generate a transport stream;
> a transport de-multiplexer coupled to the demodulator and operative to receive and process the transport stream to provide one or more encoded custom-IPG screens on a selected channel; and
> at least one video decoder coupled to the transport de-multiplexer and operative to receive and decode the one or more encoded custom-IPG screens to provide an output video sequence, and
> wherein the one or more custom-IPG screens are rendered at a head end and sent to the STT on the selected channel upon receiving a request for the custom-IPG."

Neither Shiga nor Lawler, either singly or in combination, teach the Applicants' invention as a whole.

As discussed above, Lawler discloses an interactive recording system that enables a user to select a program for recording from a program guide. In response to a user selection, the system sets a "record tag" that identifies the selected program to be recorded. The record tag is monitored and, at the appropriate time, prompts the system to control the recording of the program. Such controlled recording either can be at the user site or at the head end.

Shiga discloses transmitting and receiving an electronic program guide data that identifies programs that are to be transmitted. The Electronic program guide (EPG) data includes reduced size image data that identifies programs that are to be (or are being) transmitted. The EPG data is sent with program data that represents the different programs transmitted on different broadcast channels. On reception, the EPG data is separated from the program data and stored. When desired, the electronic program guide images are formed from the data using a NTSC encoder 27, and displayed in superposition over a received program, reference column 19, lines 20-42.

Nowhere in Shiga is there any teaching or suggestion of a transport de-multiplexer that provides one or more encoded custom-IPG screens that are rendered at the head-end on a selected channel, or a video decoder that decodes one or more encoded custom-IPG screens to provide an output video sequence.

The combined references fail to embrace the problems that the Applicants' invention solves. Therefore, the combination of Lawler and Shiga fails to teach or suggest the Applicants' invention as a whole.

As such, the Applicants submit that independent claim 22 is not obvious and fully satisfies the requirements of 35 U.S.C. §103 and is patentable thereunder. Therefore, the Applicants respectfully request that the rejections be withdrawn.

Conclusion

Thus, the Applicants submit that claims 1 and 3-22 are in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

If, however, the Examiner believes that there are any unresolved issues requiring adverse final action in any of the claims now pending in the application, it is requested that the Examiner telephone John M. Kelly or Eamon J. Wall, Esq. at (732) 530-9404 so appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,

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